

***Remarks***

Upon entry of the foregoing amendment, claims 10-11, 14, 16-20, 22-27, and 30-42 are pending in the application, with claims 10, 19, 25, and 32 being the independent claims. Claims 10, 19, 25, and 32 have been amended to further define the invention, and claims 12, 13, 15, and 21 have been canceled herein. These changes are believed to be supported by the specification and are not believed to add new matter. Therefore, it is respectfully requested that these amendments and additions be entered by the Examiner. Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections, and that they be withdrawn.

***Rejections Under 35 U.S.C. § 103***

Claims 10, 19, 25, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,737,035 to Rotzoll (hereinafter "Rotzoll") in view of U.S. Patent No. 5,564,098 to Rodal (hereinafter "Rodal"), U.S. Patent No. 5,625,307 to Scheinberg (hereinafter "Scheinberg"), and "A 3 CHIP GaAs Double Conversion TV Tuner with 70 dB of Image Rejection" by Ducourant (hereinafter "Ducourant").

Applicants respectfully traverse this rejection.

Claim 10 has been amended so that the second mixer *provides image rejection*, and so that *the differential filter is external to the substrate and has a passband that is determined to pass an up-converted output of the first mixer*.

The Office Action appears to rely on the filter 509 in Rotzoll and the filter 16 in Rodal. However, the filter 509 is on-chip and is not a differential filter. Furthermore, the

filter 509 is used in a receiver configuration where the second mixer 510 is a regular mixer and not an image reject mixer. (*See, Rotzoll, FIG.5, col.10, lines 28-32, "...(FIFF) 509 between mixer 408 and mixer 510 filters out all frequency components of the image falling on 1160 MHz, such that mixer 510 is a basic mixer similar to mixer 408, rather than an image rejection mixer."*)

The Rodal receiver configuration is a dual down-conversion receiver for GPS, meaning the first and second IF frequencies in Rodal are lower than the RF input. More specifically, Rodal indicates an RF input of 1575.72 MHz or 1227.6 MHz, a first IF frequency of 175.42 MHz or 172.4 MHz, and a second IF signal of 420 KHz or 2.6 MHz. (*See, Rodal, col. 4, lines 15-22*). The first IF filter 16 in Rodal is centered at 175 MHz (*See, col. 3, lines 12-15*), which is lower than the RF input at 1575 MHz or 1227 MHz. Therefore, the first IF filter 16 in Rodal does not have *a passband that is determined to pass an up-converted output of the first mixer*, as recited in Applicant's claim 1. Accordingly, even assuming motivation to combine, the replacement of the Rodal filter in the Rotzoll receiver does not teach each and every feature of amended claim 10, and therefore does not meet the requirements for *prima facie obviousness*. Scheinberg and Ducourant do not cure these defects.

Accordingly, Applicant requests that the rejection under 35 U.S.C. 103(a) of independent claim 10 be removed and that this claim and its respective dependent claims be passed to allowance. Independent claims 19, 25, and 32 have been similarly amended and are therefore allowable for at least the same reasons as claim 10. Accordingly, Applicants request that these independent claims and their respective dependent claims also be passed to allowance.

***IDS filed 4/15/03:***

At paragraph 5, the Office Action indicates that the IDS filed on 4/15/03 was not considered because a copy of the cited documents "are not of record." This IDS included 299 documents, and a copy of the stamped post-card is included as proof that the documents were filed at the USPTO. The undersigned is unsure what is meant by "not of record." Further clarification is requested in order to address this.

***Conclusion***

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is  
respectfully requested.

Respectfully submitted,

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